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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,991	04/11/2001	Hironori Kikkawa	Q63815	9940

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EXAMINER	
DUONG, THOI V	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/829,991	KIKKAWA, HIRONORI	
	Examiner	Art Unit	
	Thoi V Duong	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. This office action is in response to the Amendment, Paper No. 8, filed March 25, 2003.

Accordingly, claim 9 was amended. Currently, claims 9-23 are pending in this application.

2. In the last office action, claim 23 was omitted in paragraph 6 of Claim Rejections; a ground of rejection for this claim was shown in page 4, lines 7-13.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claim 9, 10 and 18-20 rejected under 35 U.S.C. 102(e) as being anticipated by Miyahara et al. (USPN 6,297,867 B1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As shown in Figs. 1-3, Miyahara et al. discloses a method of fabricating an LCD device having a common electrode 31 comprising vertical stripes; a plurality of scanning lines 23; a gate insulating film 36; a plurality of signal lines 23; a plurality of pixel electrode portions 30 formed parallel to said common electrode vertical stripes (Fig. 1); and a plurality of pixel areas formed on a first substrate 21, comprising:

patterning a black matrix 27 is patterned on a second substrate 22; and

disposing liquid crystal 34 between said first substrate and said second substrate,

wherein said black matrix covers an area other than said pixel area and said common electrode electrically shields said pixel area from a voltage of said black matrix (col. 7, lines 1-40), and said black matrix overlaps first portions of said signal lines near a thin-film transistor 26, and said common electrode overlaps portions, which are parallel to the vertical stripes of the common electrode, other than said first portions of said signal lines; and

wherein the gate insulating film formed of silicon oxide, an amorphous silicon layer 25 and a n+ type amorphous silicon layer 35 are formed on said scanning lines and pixel electrodes.

The method of Miyahara et al. further comprises configuring horizontal and vertical stripes of said plurality of pixel electrodes and vertical stripes of said common electrode to generate an electrical field having a main component extending parallel to said first substrate and said second substrate and perpendicular to said pixel electrodes and said common electrode in said pixel areas when a voltage is applied to these electrodes, wherein said pixel electrode stripes are formed parallel to said common electrode vertical stripes (col. 8, line 59 through col. 9, line 4).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 16, 17 and 21-23 are rejected under 35 U.S.C. 103(a) as being obvious over Miyahara et al. (USPN 6,297,867 B1) in view of Suzuki (USPN 6,509,948 B2).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an

invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Miyahara et al. discloses a method of fabricating a LCD device that is basically the same as that recited in claims 16, 17 and 21-23 except for forming orientation layers, scattering polymer beads, bonding the substrates and positioning the polarization plates. As shown in Fig. 2A, in order to obtain a LCD device with wide angle of visibility (col. 3, lines 59-64), Suzuki discloses a method of fabricating a LCD device having a first substrate 1, a second substrate 2, a gate electrode 10 and a common electrode 11 formed of chrome on the first substrate, and orientation layers 17 and 25 formed between a surface of each of said first and second substrates and said liquid crystal, said forming process comprising a rubbing process (col. 5, lines 41-43 and col. 6, lines 11-23).

The method of Suzuki further comprises:

scattering polymer beads 30 and 31 for maintaining the fixed cell gap;

bonding said first substrate to said second substrate, wherein said liquid crystal is disposed between said first substrate and said second substrate (col. 6, lines 24-36); and

positioning first and second polarization plates 19 and 26 at respective first and second substrates, wherein the patching disposition of the polarization plates are decided in the direction to realize the normally-black mode (col. 6, lines 37-41).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of fabricating a LCD device of Miyahara et al. with the teaching of Suzuki by forming orientation layers, scattering polymer beads, bonding the substrates and positioning the polarization plates so as to obtain a good cell image quality for the display.

7. Claims 11 is rejected under 35 U.S.C. 103(a) as being obvious over Miyahara et al. (USPN 6,297,867 B1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR

1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Miyahara et al. further discloses that the black matrix is made of an electric conductive material and employed to shield unnecessary light (col. 4, lines 57-63 and col. 9, lines 46-47). As known in the art, Chromium is used as a conductive black matrix because it has a light blocking characteristic. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form black matrix of chromium so as to obtain a conductive black matrix having a light blocking characteristic.

8. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being obvious over Miyahara et al. (USPN 6,297,867 B1) in view of Matsumoto et al. (USPN 6,278,427 B1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an

invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Miyahara et al. discloses a method of fabricating a LCD device that is basically the same as that recited in claims 12-15 except for a process of fabricating color filters. As shown in Fig. 3, Matsumoto et al. discloses a method of fabricating an LCD device comprising forming color filters 109-110 using a plurality of photolithographic steps for a polyimide based layer, wherein said photolithographic steps comprise dispersing RGB pigments in a photosensitive polymer such that the amplitude of drain voltage differs among the color layers so as to prevent the image-sticking defect (col. 9, lines 5-27). Matsumoto also discloses that an overcoat layer is formed on the respective color layers to flatten the gap and enhance the etching characteristics (col. 9, lines 38-42). Accordingly, the overcoat layer also eliminates impurity ion migration into the liquid crystal. Thus, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify the method of Miyahara et al. with the teaching of Matsumoto et al. by forming color filters using a plurality of photolithographic steps which comprise dispersing RGB pigments in a photosensitive polymer such that the amplitude of drain voltage differs among the color layers so as to prevent the image-sticking defect.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (703) 308-3171. The examiner can normally be reached on Monday-Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (703) 305-3492.

Thoi Duong

06/14/2003

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